PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
H04Q 7/22, 7/32, G06F 17/30

A2

(11) International Publication Number: WO 98/59506

(43) International Publication Date: 30 December 1998 (30.12.98)

(21) International Application Number: PCT/SE98/01180

(22) International Filing Date: 16 June 1998 (16.06.98)

(30) Priority Data:
9702388-1 23 June 1997 (23.06.97) SE

(71) Applicant: TELIA AB [SE/SE]; Mårbackagatan 11, S-123 86 Farsta (SE).

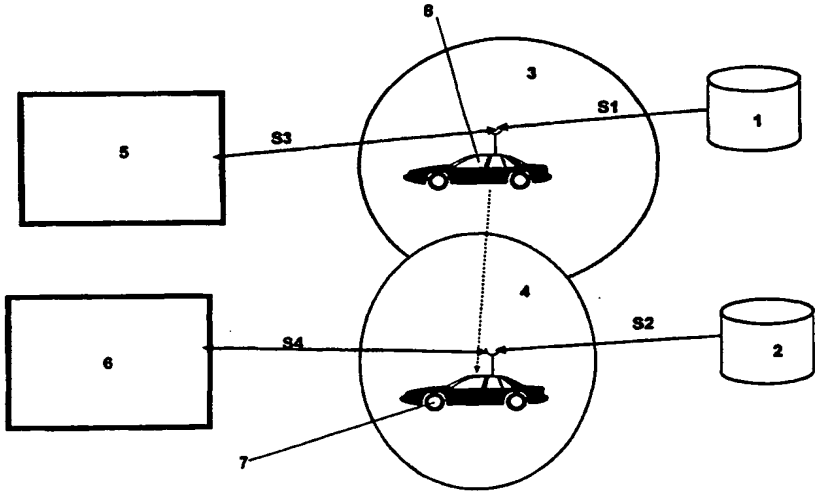
(72) Inventor: EMILSSON, Stellan; Grän 31, S-655 94 Karlstad (SE).

(74) Agent: PRAGSTEN, Rolf; Telia Research AB, Vitsandsgatan 9, S-123 86 Farsta (SE).

(81) Designated States: EE, LT, LV, NO, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
Without international search report and to be republished upon receipt of that report.

(54) Title: IMPROVEMENTS IN OR RELATING TO INFORMATION DISTRIBUTION



(57) Abstract

The present invention provides a method whereby a traveller, currently located in a location with which he is not familiar, can easily access information, relating to his current location, over the Internet, or from some other computer system. In particular, the present invention implements the method by using a telephone system, which may be either the PSTN, or a mobile cellular system, such as the GSM system, to identify the current location of an individual seeking information relevant to his current location, using data on the individual's current location to automatically locate relevant information on a computer database, or databases, and making this information available to the individual desiring the information. A user's terminal may employ software to generate a menu driven selection process and conceal, from the user, details of the automated process of searching for the most relevant information, thus creating a user friendly system. The present invention can be used with any computer-based database, but is primarily intended for use with the Internet.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	**ES**	Spain	**LS**	Lesotho	**SI**	Slovenia
AM	Armenia	**FI**	Finland	**LT**	Lithuania	**SK**	Slovakia
AT	Austria	**FR**	France	**LU**	Luxembourg	**SN**	Senegal
AU	Australia	**GA**	Gabon	**LV**	Latvia	**SZ**	Swaziland
AZ	Azerbaijan	**GB**	United Kingdom	**MC**	Monaco	**TD**	Chad
BA	Bosnia and Herzegovina	**GE**	Georgia	**MD**	Republic of Moldova	**TG**	Togo
BB	Barbados	**GH**	Ghana	**MG**	Madagascar	**TJ**	Tajikistan
BE	Belgium	**GN**	Guinea	**MK**	The former Yugoslav Republic of Macedonia	**TM**	Turkmenistan
BF	Burkina Faso	**GR**	Greece			**TR**	Turkey
BG	Bulgaria	**HU**	Hungary	**ML**	Mali	**TT**	Trinidad and Tobago
BJ	Benin	**IE**	Ireland	**MN**	Mongolia	**UA**	Ukraine
BR	Brazil	**IL**	Israel	**MR**	Mauritania	**UG**	Uganda
BY	Belarus	**IS**	Iceland	**MW**	Malawi	**US**	United States of America
CA	Canada	**IT**	Italy	**MX**	Mexico	**UZ**	Uzbekistan
CF	Central African Republic	**JP**	Japan	**NE**	Niger	**VN**	Viet Nam
CG	Congo	**KE**	Kenya	**NL**	Netherlands	**YU**	Yugoslavia
CH	Switzerland	**KG**	Kyrgyzstan	**NO**	Norway	**ZW**	Zimbabwe
CI	Côte d'Ivoire	**KP**	Democratic People's Republic of Korea	**NZ**	New Zealand		
CM	Cameroon			**PL**	Poland		
CN	China	**KR**	Republic of Korea	**PT**	Portugal		
CU	Cuba	**KZ**	Kazakstan	**RO**	Romania		
CZ	Czech Republic	**LC**	Saint Lucia	**RU**	Russian Federation		
DE	Germany	**LI**	Liechtenstein	**SD**	Sudan		
DK	Denmark	**LK**	Sri Lanka	**SE**	Sweden		
EE	Estonia	**LR**	Liberia	**SG**	Singapore		

Improvements, in or Relating to Information Distribution

The present invention relates to a system, receiving terminal and method for the distribution of information of limited geographical interest.

An individual who is travelling and temporarily located at a place geographically remote from his normal home location, i.e. office, or residence, frequently needs to have access to information concerning his/her current location. Such information may be available on the Internet and, if it were possible to access that information with relative ease, would represent a valuable resource for travellers.

Unfortunately, at the present time, there is a vast volume of information available on the Internet and the amount of available information can be expected to grow, in the future, at an ever increasing rate. This means that the difficulty and time spent locating relevant information is a real obstacle to the use of the Internet, especially for an individual who is away from his normal location and contacts, and may be unfamiliar with the location of information relevant to his current location on the Internet. From the point of view of the information provider, this makes it very difficult to effectively target information, and advertising, to an intended audience.

There are many organisations, such as garages, filling stations, restaurants, weather forecasters, etc., interested in accurately targeting locally based information. on visitors to their location. Equally, many travellers would welcome the opportunity to readily access information on where they can obtain goods and services in a location with which they are not familiar. Use of the Internet is growing rapidly and many, if not most, people have at least the rudimentary skills necessary to enable them to access the Internet. However, especially for beginners, surfing the Internet is an extremely time consuming and frustrating occupation, in the absence of skilled guidance and knowledge on where to search for data of interest. Where the intention is to locate local guides and information, a further complication is that the information and guides are

continually being updated and changed and it is by no means simple and straightforward to find the correct, or most current guide, or information.

The problem, to which the solution proposed by the present invention is directed, is to provide a method whereby a traveller currently located in a location with which he is not familiar can easily access information, relating to his current location, over the Internet, or from some other computer system.

The present invention provides a solution to this problem by using a telephone system, which may be either the PSTN, or a mobile cellular system, such as the GSM system, to identify the current location of an individual seeking information relevant to his current location, using data on the individual's current location to automatically locate relevant information on a computer database, or databases, and making this information available to the individual desiring the information. A user's terminal may employ software to generate a menu driven selection process and conceal, from the user, details of the automated process of searching for the most relevant information, thus creating a user friendly system.

The present invention can be used with any computer-based database, but is primarily intended for use with the Internet.

According to a first aspect of the present invention, there is provided a system for distributing information relating to a geographical location in which an information user is located, said system including a transmission network suitable for the transmission of data in electronic form, a computer-based data base containing information relating to said geographic area, and a plurality of information user terminals, characterised in that location means are provided for routing information to user terminals located in a particular geographic area, and in that data means are provided for identifying local information relating to said particular geographical area and transmitting either, data relating to the location of said local information, or said local information itself, to a user terminal, over

said transmission network.

Said transmission network may be a telephone network.

Said telephone network may be a mobile cellular telephone network.

Said mobile cellular telephone network may be a GSM cellular telephone network having a facility to provide cell broadcasts using a SMS.

Said location means may be implemented by said SMS providing cell broadcasts of information relating to a geographic area asscciated with a cell.

Said computer-based data base may be located on local information servers forming part of the Internet, and said cell broadcasts of information may contain an "http" address for a local information server containing information relating to a geographic area associated with a cell in which said cell broadcast is made.

A user terminal may comprise a mobile GSM transceiver and a portable computer having Internet access software loaded thereon.

Said GSM cellular network may include a mobile system database containing "http" addresses for local information servers which contain information relating to the geographic areas of the individual cells of said GSM cellular network, and said mobile system database may be adapted to supply data for inclusion in said cell broadcasts.

Said telephone network may be a PSTN, and said location means may include caller identification means for identifying a calling parties geographic location by determining and analysing a calling party's A-number.

On request from a subscriber for information relating to the subscriber's current location, means may be provided for transmitting an "http" address for an Internet local server containing information relating to said subscriber's current

location.

Said telephone network may be a PSTN, and said location means may include caller identification means for identifying a calling parties geographic location from an IP address for said calling party.

A user terminal may comprise a PC equipped with a modem, said PC having Internet access software loaded thereon.

A user terminal may be adapted, on receipt of data identifying an "http" address for an Internet server on which information relating to the location of a subscriber is held, to automatically access said "http" address.

Said information relating to a geographical area may include information relating to one, or more of the following topics:

- car repair services;
- travel services and timetables;
- restaurants;
- municipal services;
- places of local interest;
- medical services;
- maps;
- local weather;
- traffic conditions.

Said user terminal may include location means adapted to access a GPS and determine a geographical location of said terminal, and in that said user terminal includes means to communicate said user terminal's location, with a request for local information.

According to a second aspect of the present invention, there is provided a method for distributing information relating to a geographical location in which an information user is located, characterised by identifying local information relating to a particular geographical area in which a user terminal is located and transmitting data relating to the location of said local information, or said local information itself, to said user terminal, over a transmission network.

Said transmission network may be a telephone network.

Said telephone network may be a mobile cellular telephone network.

Said mobile cellular telephone network may be a GSM cellular telephone network having a facility to provide cell broadcasts using a SMS.

SMS cell broadcasts of information relating to a geographic area associated with a cell may be provided.

Said local information may be located on local information servers forming part of the Internet, and said cell broadcasts of information may contain an "http" address for a local information server containing information relating to the geographic area associated with a cell in which said cell broadcast is made.

Said information user terminals may comprise a mobile GSM transceiver and a portable computer having Internet access software loaded thereon.

Said GSM cellular network may include a mobile system database containing "http" addresses for local information servers containing information relating to the geographic areas of the individual cells of said GSM cellular network, and said mobile system database may supply data for inclusion in said

cell broadcasts.

Said telephone network may be a PSTN, and a calling party's geographic location may be identified from an analysis of a calling party's A-number.

An "http" address for an Internet local server containing information relating to said subscriber's current location may be transmitted, on receipt of a request from a subscriber for information relating to the subscriber's current location.

Said telephone network may be a PSTN, and a calling party's geographic location may be identified from an IP address for said calling party.

Said information relating to a geographical area may include information relating to one, or more of the following topics:

- car repair services;
- travel services and timetables;
- restaurants;
- municipal services;
- places of local interest;
- medical services;
- maps;
- local weather;
- traffic conditions.

According to a third aspect of the present invention, there is provided an

information user terminal, for use with a system for distributing information as set forth above, characterised in that said information user terminal includes a mobile telephone transceiver, and a PC loaded with software for accessing the Internet, said information user terminal being adapted to receive an "http" address for a local information server transmitted by a cell broadcast and, on receipt of said "http" address, to automatically access said "http" address.

According to a fourth aspect of the present invention, there is provided an information user terminal, characterised in that said information user terminal is adapted to operate with a system for distributing information as set forth above, or adapted to operate in accordance with a method as set forth above.

Embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 illustrates, in schematic form, the operation of one embodiment of the present invention.

Referring to Figure 1, there is shown, in schematic form, a GSM mobile telephone system in which the present invention is implemented. Two vehicles 7, and 8, equipped with GSM mobile transceivers linked to portable computers with Internet access software, are shown in local areas 4 and 3, respectively. Local areas 3 and 4 have system databases 1 and 2. Each of the local databases 1 and 2 contains a list of "http" addresses to local information servers 5 and 6 associated with local areas 3 and 4 respectively.

The system databases 1 and 2 may be associated with mobile switching centres (MSC) for the GSM mobile telephone system. Depending on geographic factors, local areas 3 and 4 may be served by a single system database, or, as shown in Figure 1, by separate databases.

A signal, S1, may transmitted from all base stations, of a GSM system, within the defined geographic area 3, at equal intervals of time. The signal S1 is generated via the GSM short message service (SMS) and is a cell broadcast which

contains at least one "http" address for local information servers. Signal S1 preferably contains a single "http" address for one local information server, 5, via which, if necessary, any other local information which is available may be accessed, via hyper text marks.

Similarly, a signal, S2, may transmitted from all base stations within the defined geographic area 4, at equal intervals of time. Again, the signal S2 is generated via the GSM short message service (SMS) and is a cell broadcast which contains at least one "http" address for local information servers. Signal S2 also preferably contains a single "http" address for one local information server, 6, via which, if necessary, any other local information which is available may be accessed, via hyper text marks.

S3 indicates the exchange of signals required to retrieve information from the home page of local information server 5 via a GSM data channel. Similarly S4 indicates the exchange of signals required to retrieve information from the home page of local information server 6 via a GSM data channel.

By using a terminal having a GSM transceiver, coupled to a PC with Internet access e.g. using Netscape, a subscriber can automatically obtain access to information relating to his current location. A GSM system operator may choose to provide a home page on the Internet which is specially formatted to provide easy access to the type of local information which a subscriber to the service may wish to access. The PC may be equipped with software, provided by the GSM system operator, to facilitate easy access to this service. Such software, on actuation, may be arranged to receive the appropriate signals S1, S2, and automatically access the appropriate home page for the local information servers 5, and 6.

Alternatively, the GSM system operator may offer a service to companies and institutions for the distribution of the "http" addresses of their home pages via GSM cell broadcasts. However, the preferred alternative is for the GSM system operator to distribute a single "http" address to a local information server via SMS cell broadcasts. Clearly, to enable this service to be successfully operated,

subscribers must have access to software which at least has the capability of:

- receiving SMS messages;
- reading out addresses to the local information servers; and
- automatically ensuring that the current home page with the requested local information is displayed.

Many alternative embodiments can be devised which fall within the spirit of the present invention, for example:

1. The system of the present invention may employ a computer-based database which operates independently of the Internet.

2. The location of a subscriber to the service may be identified by the GSM network determining the base station used for communication with the subscriber. This information can then be used to automatically identify and display on a users terminal a menu driven gateway to information relevant to the user's current location.

3. The location of a subscriber may be determined by a GPS unit built into his/her terminal.

4. The system may be based on the PSTN, rather than a mobile telephone system, and a standard calling number identification system may be used in combination with an A-number (standard telephone number) analysis to identify the location of a calling subscriber.

5. If a subscriber uses the system via the PSTN, the system may identify the location of the subscriber from the subscriber's IP address.

At the heart of the present invention lies the ability of a telecommunications operator to identify the geographical location of a calling subscriber and offer

location specific information to that subscriber. The operator may recover the costs of providing this service by charging companies and institutions who wish to use the service to target their information to subscribers, or by charging subscribers who wish to obtain local information with relative ease, or both.

Some examples of the application of the present invention are briefly set out below:

- an individual travelling away from home may have a problem with his car and needs to find the location of the nearest workshop able to repair the car - the system of the present invention can provide him with details of workshop telephone numbers, hours of business etc.;

- the system of the present invention may provide a traveller with details of available travel options, including timetables, car hire, etc.;

- restaurants available within reach of a current location, including hours of opening, menus, etc.;

- municipal services available in a particular location;

- tourist information;

- information on medical services, care centres and pharmacies;

- maps of a particular area;

- local weather forecasts; and

- local traffic information.

Many other variations on the present invention will be apparent to those

skilled in the art, for example, the use of audio distribution of certain classes of information to subscribers who are driving a vehicle.

CLAIMS

1. A system for distributing information relating to a geographical location in which an information user is located, said system including a transmission network suitable for the transmission of data in electronic form, a computer-based data base containing information relating to said geographic area, and a plurality of information user terminals, characterised in that location means are provided for routing information to user terminals located in a particular geographic area, and in that data means are provided for identifying local information relating to said particular geographical area and transmitting either, data relating to the location of said local information, or said local information itself, to a user terminal, over said transmission network.

2. A system, as claimed in claim 1, characterised in that said transmission network is a telephone network.

3. A system, as claimed in claim 2, characterised in that said telephone network is a mobile cellular telephone network.

4. A system, as claimed in claim 3, characterised in that said mobile cellular telephone network is a GSM cellular telephone network having a facility to provide cell broadcasts using a SMS.

5. A system, as claimed in claim 4, characterised in that said location means is implemented by said SMS providing cell broadcasts of information relating to a geographic area associated with a cell.

6. A system, as claimed in claim 5, characterised in that said computer-based data base is located on local information servers forming part of the Internet, and in that said cell broadcasts of information contain an "http" address for a local information server containing information relating to a geographic area associated with a cell in which said cell broadcast is made.

7. A system, as claimed in claim 6, characterised in that a user terminal comprises a mobile GSM transceiver and a portable computer having Internet access software loaded thereon.

8. A system, as claimed in either claim 6, or 7, characterised in that said GSM cellular network includes a mobile system database containing "http" addresses for local information servers which contain information relating to the geographic areas of the individual cells of said GSM cellular network, and in that said mobile system database is adapted to supply data for inclusion in said cell broadcasts.

9. A system, as claimed in claim 2, characterised in that said telephone network is a PSTN, and in that said location means includes caller identification means for identifying a calling parties geographic location by determining and analysing a calling party's A-number.

10. A system as claimed in claim 9, characterised in that, on request from a subscriber for information relating to the subscriber's current location, means are provided for transmitting an "http" address for an Internet local server containing information relating to said subscriber's current location.

11. A system, as claimed in claim 2, characterised in that said telephone network is a PSTN, and in that said location means includes caller identification means for identifying a calling parties geographic location from an IP address for said calling party.

12. A system, as claimed in any of claims 9, to 11, characterised in that a user terminal comprises a PC equipped with a modem, said PC having Internet access software loaded thereon.

13. A system, as claimed in either claim 7, or 12, characterised in that a user terminal is adapted, on receipt of data identifying an "http" address for an Internet server on which information relating to the location of a subscriber is held, to automatically access said "http" address.

14. A system, as claimed in any previous claim, characterised in that said information relating to a geographical area includes information relating to one, or more of the following topics:

- car repair services;
- travel services and timetables;
- restaurants;
- municipal services;
- places of local interest;
- medical services;
- maps;
- local weather;
- traffic conditions.

15. A system, as claimed in claim 7, characterised in that said user terminal includes location means adapted to access a GPS and determine a geographical location of said terminal, and in that said user terminal includes means to communicate said user terminal's location, with a request for local information.

16. A method for distributing information relating to a geographical location in which an information user is located, characterised by identifying local information relating to a particular geographical area in which a user terminal is located and transmitting data relating to the location of said local information, or said local information itself, to said user terminal, over a transmission network.

17. A method, as claimed in claim 16, characterised by said transmission

network being a telephone network.

18. A method, as claimed in claim 17, characterised by said telephone network being a mobile cellular telephone network.

19. A method, as claimed in claim 18, characterised by said mobile cellular telephone network being a GSM cellular telephone network having a facility to provide cell broadcasts using a SMS.

20. A method, as claimed in claim 19, characterised by providing SMS cell broadcasts of information relating to a geographic area associated with a cell.

21. A method, as claimed in claim 20, characterised by said local information being located on local information servers forming part of the Internet, and by said cell broadcasts of information containing an "http" address for a local information server containing information relating to the geographic area associated with a cell in which said cell broadcast is made.

22. A method, as claimed in claim 21, characterised by said information user terminals comprising a mobile GSM transceiver and a portable computer having Internet access software loaded thereon.

23. A method, as claimed in either claim 21, or 22, characterised by said GSM cellular network including a mobile system database containing "http" addresses for local information servers containing information relating to the geographic areas of the individual cells of said GSM cellular network, and by said mobile system database supplying data for inclusion in said cell broadcasts.

24. A system, as claimed in claim 17, characterised by said telephone network being a PSTN, and by identifying a calling party's geographic location from an analysis of a calling party's A-number.

25. A method, as claimed in claim 24, characterised by transmitting an "http" address for an Internet local server containing information relating to said

subscriber's current location, on receipt of a request from a subscriber for information relating to the subscriber's current location.

26. A method, as claimed in claim 17, characterised by said telephone network being a PSTN, and by identifying a calling party's geographic location from an IP address for said calling party.

27. A method, as claimed in any of claims 15 to 16, characterised by said information relating to a geographical area including information relating to one, or more of the following topics:

- car repair services;
- travel services and timetables;
- restaurants;
- municipal services;
- places of local interest;
- medical services;
- maps;
- local weather;
- traffic conditions.

28. An information user terminal, for use with a system for distributing information as claimed in any of claims 1 to 8 and 13 to 15, characterised in that said information user terminal includes a mobile telephone transceiver, and a PC loaded with software for accessing the Internet, said information user terminal being adapted to receive an "http" address for a local information server

transmitted by a cell broadcast and, on receipt of said "http" address, to automatically access said "http" address.

29. An information user terminal, characterised in that said information user terminal is adapted to operate with a system for distributing information as claimed in any of claims 1 to 15, or adapted to operate in accordance with the method as claimed in one of claims 16 to 27.

1 / 1

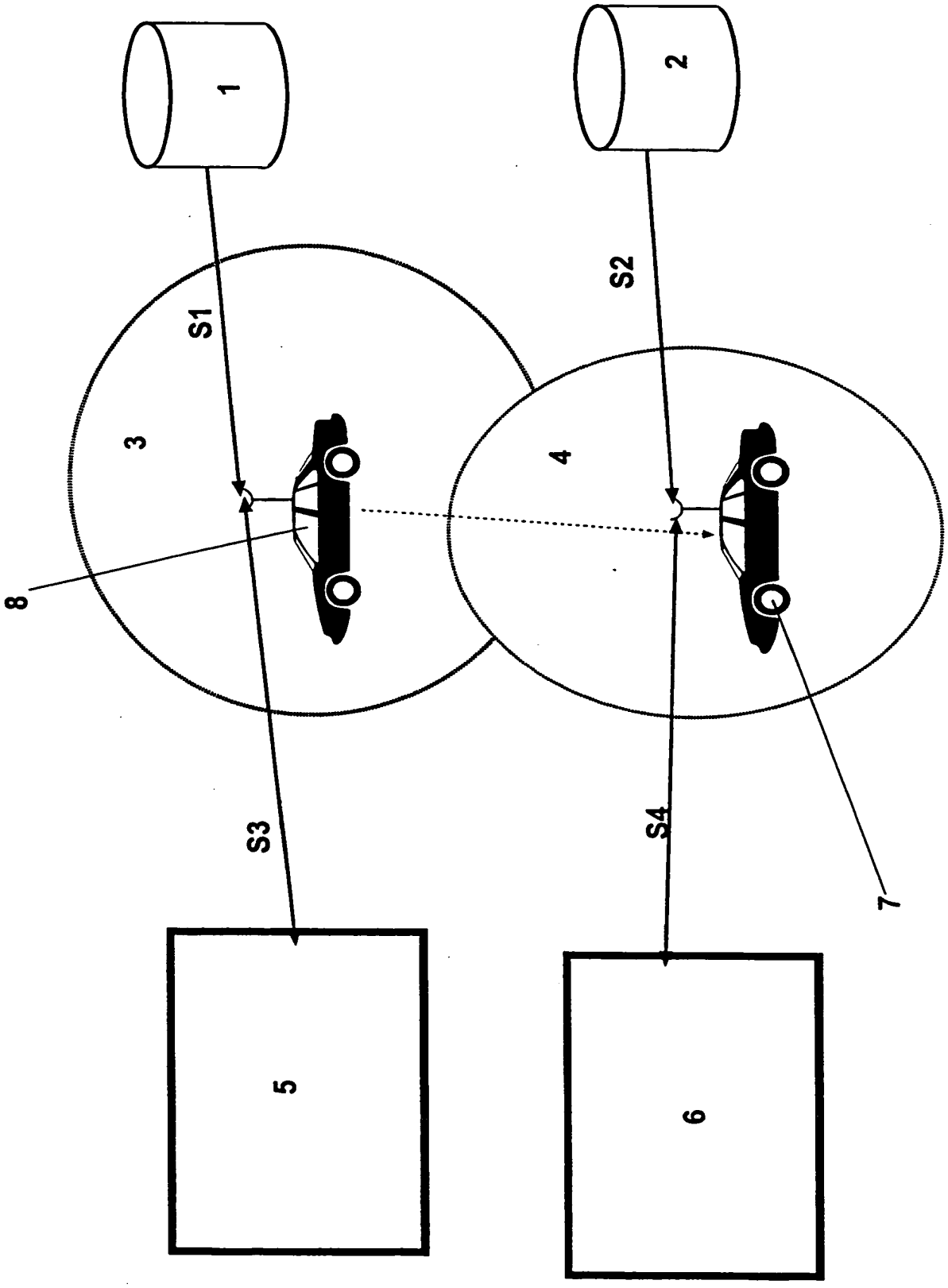


FIGURE 1

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
H04Q 7/22, 7/32, G06F 17/30

A3

(11) International Publication Number: **WO 98/59506**

(43) International Publication Date: 30 December 1998 (30.12.98)

(21) International Application Number: PCT/SE98/01180

(22) International Filing Date: 16 June 1998 (16.06.98)

(30) Priority Data:
9702388-1 23 June 1997 (23.06.97) SE

(71) Applicant: TELIA AB [SE/SE]; Mårbackagatan 11, S-123 86 Farsta (SE).

(72) Inventor: EMILSSON, Stellan; Grän 31, S-655 94 Karlstad (SE).

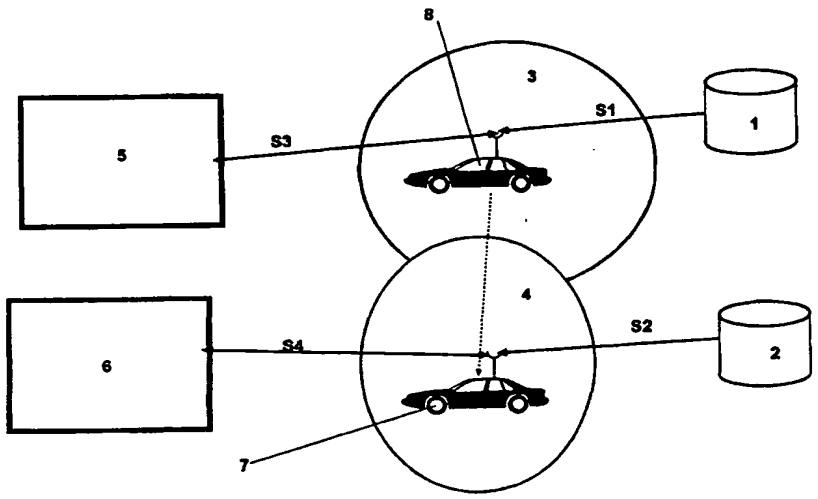
(74) Agent: PRAGSTEN, Rolf; Telia Research AB, Vitsandsgatan 9, S-123 86 Farsta (SE).

(81) Designated States: EE, LT, LV, NO, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(88) Date of publication of the international search report:
25 March 1999 (25.03.99)

(54) Title: IMPROVEMENTS IN OR RELATING TO INFORMATION DISTRIBUTION



(57) Abstract

The present invention provides a method whereby a traveller, currently located in a location with which he is not familiar, can easily access information, relating to his current location, over the Internet, or from some other computer system. In particular, the present invention implements the method by using a telephone system, which may be either the PSTN, or a mobile cellular system, such as the GSM system, to identify the current location of an individual seeking information relevant to his current location, using data on the individual's current location to automatically locate relevant information on a computer database, or databases, and making this information available to the individual desiring the information. A user's terminal may employ software to generate a menu driven selection process and conceal, from the user, details of the automated process of searching for the most relevant information, thus creating a user friendly system. The present invention can be used with any computer-based database, but is primarily intended for use with the Internet.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	**ES**	Spain	**LS**	Lesotho	**SI**	Slovenia
AM	Armenia	**FI**	Finland	**LT**	Lithuania	**SK**	Slovakia
AT	Austria	**FR**	France	**LU**	Luxembourg	**SN**	Senegal
AU	Australia	**GA**	Gabon	**LV**	Latvia	**SZ**	Swaziland
AZ	Azerbaijan	**GB**	United Kingdom	**MC**	Monaco	**TD**	Chad
BA	Bosnia and Herzegovina	**GE**	Georgia	**MD**	Republic of Moldova	**TG**	Togo
BB	Barbados	**GH**	Ghana	**MG**	Madagascar	**TJ**	Tajikistan
BE	Belgium	**GN**	Guinea	**MK**	The former Yugoslav Republic of Macedonia	**TM**	Turkmenistan
BF	Burkina Faso	**GR**	Greece			**TR**	Turkey
BG	Bulgaria	**HU**	Hungary	**ML**	Mali	**TT**	Trinidad and Tobago
BJ	Benin	**IE**	Ireland	**MN**	Mongolia	**UA**	Ukraine
BR	Brazil	**IL**	Israel	**MR**	Mauritania	**UG**	Uganda
BY	Belarus	**IS**	Iceland	**MW**	Malawi	**US**	United States of America
CA	Canada	**IT**	Italy	**MX**	Mexico	**UZ**	Uzbekistan
CF	Central African Republic	**JP**	Japan	**NE**	Niger	**VN**	Viet Nam
CG	Congo	**KE**	Kenya	**NL**	Netherlands	**YU**	Yugoslavia
CH	Switzerland	**KG**	Kyrgyzstan	**NO**	Norway	**ZW**	Zimbabwe
CI	Côte d'Ivoire	**KP**	Democratic People's Republic of Korea	**NZ**	New Zealand		
CM	Cameroon			**PL**	Poland		
CN	China	**KR**	Republic of Korea	**PT**	Portugal		
CU	Cuba	**KZ**	Kazakstan	**RO**	Romania		
CZ	Czech Republic	**LC**	Saint Lucia	**RU**	Russian Federation		
DE	Germany	**LI**	Liechtenstein	**SD**	Sudan		
DK	Denmark	**LK**	Sri Lanka	**SE**	Sweden		
EE	Estonia	**LR**	Liberia	**SG**	Singapore		

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 98/01180

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: H04Q 7/22, H04Q 7/32, G06F 17/30
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: G06F, H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CLAIMS, EDOC, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9707467 A1 (PHELAN, SEAN), 27 February 1997 (27.02.97), page 5, line 5 - line 25; page 6, line 34 - page 7, line 9; page 13, line 28 - page 16, line 36	1-3,9,11,14, 16-18,24, 26-29
Y		4-8,10,12, 13,15,19-23, 25
	--	
Y	US 5543789 A (DAVID A. BEHR ET AL), 6 August 1996 (06.08.96), column 4, line 65 - column 5, line 37; column 6, line 13 - column 7, line 54; column 10, line 17 - column 16, line 7	6-8,10,12, 13,15,19-23, 25
	--	

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" erlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
17 December 1998	21 -12- 1998
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. + 46 8 666 02 86	Authorized officer Bo Gustavsson Telephone No. + 46 8 782 25 00

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 98/01180

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 9708906 A1 (SENDIT AB), 6 March 1997 (06.03.97), see the whole document	4,5
A		1-3,6-29
	--	
A	US 5561704 A (STEVEN C. SALIMANDO), 1 October 1996 (01.10.96), see the whole document	1-29
	--	
P,X	US 5682525 A (W. LINCOLN BOUVE ET AL), 28 October 1997 (28.10.97), see the whole document	1,16
P,A		2-15,17-29
	--	
P,X	IEICE TRANS. COMMUN., Volume E80-B, No 10, October 1997, NOBUTSUGU FUJINO ET AL, "Mobile Information Service Based on Multi-Agent Architecture"	1,16
P,A		2-15,17-29
	--	

INTERNATIONAL SEARCH REPORT

Information on patent family members

01/12/98

International application No.
PCT/SE 98/01180

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9707467 A1	27/02/97	AU 6749496 A	12/03/97
		CA 2229733 A	27/02/97
		EP 0845124 A	03/06/98
		GB 9516762 D	00/00/00
US 5543789 A	06/08/96	AU 2997795 A	19/01/96
		CA 2192545 A	04/01/96
		EP 0766811 A	09/04/97
		JP 10502174 T	24/02/98
		US 5808566 A	15/09/98
		WO 9600373 A	04/01/96
WO 9708906 A1	06/03/97	AU 6894196 A	19/03/97
		CA 2230544 A	06/03/97
		EP 0872128 A	21/10/98
		NO 980836 A	29/04/98
		NZ 316656 A	28/07/98
		PL 325196 A	06/07/98
		SE 503752 C	26/08/96
		SE 9502995 A	26/08/96
US 5561704 A	01/10/96	NONE	
US 5682525 A	28/10/97	NONE	